

Folic Acid For the Family



Mother, baby, father, child, or grandparent.... folic acid is important for the health of every member of the family.



FIVE reasons to get enough FOLIC ACID

Prevent or protect against:

1. Birth Defects
2. Heart Disease and Stroke
3. Cancers
4. Cognitive Impairment
5. Depression

1) Birth Defects

Protect against neural tube defects and Down's Syndrome for a healthy baby!

For women of child-bearing age, pregnant women and the babies they carry, getting enough folic acid is extremely important. Adequate folic acid intake in pregnant women has been shown to prevent neural tube defects in infants. A baby's neural tube and early brain develop in the first two to three weeks of pregnancy, before most women even learn that they are pregnant. The brain continues to develop even after the eighth week of pregnancy, but it is during the first few weeks of



development that folic acid is essential to proper closure of the neural tube. If the tube does not close properly, a baby may be born with neural tube defects like spina bifida or anencephaly (without a properly developed brain).

Fortunately, the majority of neural tube defects can be prevented by adequate folate intake before and during pregnancy. Any woman who may become pregnant or who is trying to become pregnant should ensure that she gets enough folic acid, either from folate in foods or from a vitamin supplement (see [Folic Acid Facts](#) for more information).



Down's syndrome has also been associated with maternal folate status. Inadequate folate levels may interact with gene mutations to cause chromosomal instability and the abnormality characteristic of Down's Syndrome. Again, adequate folate intake, with diet and/or supplementation may prevent Down's Syndrome.¹

2) Heart and Vascular Health

Protect your heart and blood vessels! A high blood level of a compound called homocysteine is considered an independent risk factor for heart disease, heart attacks, and stroke.² A high homocysteine level may be most worrisome for people who already have heart disease.³ Folate, along with vitamin B12, helps the body convert homocysteine to another compound, so low folate levels have been associated with high blood homocysteine levels. Folate supplementation has been used effectively as a treatment to lower blood homocysteine levels.² It is not completely clear if the high blood homocysteine actually helps cause heart and blood vessel problems or if it is only a marker of the disease conditions, but ensuring that you get enough folate may keep your heart and blood vessels healthy, and it definitely will not hurt! For people with diabetes, folate may be especially important for health because high homocysteine levels have been associated with vascular complications of diabetes including hypertension and protein in the urine.⁴



3) Cancers

Reduce your risk of cervical, colorectal, and other cancers! Recent reviews of cancer research show that dietary folate may protect against the development of cervical cancer along with other B vitamins, antioxidants, and plant compounds called phytochemicals. In one study, total dietary folate from food and supplements was inversely associated with both types of cervical lesions that may indicate cervical cancer.⁵ Another review found that high homocysteine levels probably increase the risk of cervical cancer.⁶ Folate's role in the conversion of homocysteine to a non-toxic compound may explain some of its apparent protective effect on cervical cancer development. Folate may also protect against development of high-risk Human Papilloma Virus (HPV), the most common cause of cervical cancer.



Epidemiological studies have consistently shown an inverse relationship between folate status and risk of colorectal cancer. Insufficient folate, specifically, has been linked with increased risk of development of colorectal tumors.⁷ Adequate folate intake may most effectively protect against cancers of the colon and rectum in people with certain gene profiles.⁸ Folate's protective effect may be due to its role in ensuring proper DNA structure in colon cells.⁹



Preliminary research suggests that folate may also protect against development of lung and breast cancers.^{10, 11, 12, 13, 14} Lung cancer is the current leading cause of cancer death in all men and women in the U.S., and breast cancer is the second leading cause of cancer death in U.S. women.¹⁵ Fruit and vegetables in general have been associated with lower risk of developing many different types of cancers. Future research may reveal the specific ways in which nutrients within these foods, such as folate, may protect against cancer development. Until then, it is a good idea to remember the five reasons for every family member to get enough folic acid! (See [Folic Acid Facts](#) for information about recommended daily amounts and ways to get the vitamin in your diet.)

4) Cognitive Function and Alzheimer's Disease



Stay mentally strong for longer! Folate may not cure cognitive disfunction associated with aging, but low blood folate levels have been associated with decreased cognitive function, dementia, and Alzheimer's disease in aging individuals.^{16, 17} Folate was even found to protect against some types of cognitive decline, especially verbal fluency and spatial skills.¹⁶ Overall, the early evidence suggests that adequate folate intake throughout life, especially into late adulthood, may prevent some of the most devastating mental effects of aging.

5) Depression & Mood

Eat the blues away! Recent research has found that folic acid supplements can successfully treat depression in women of child-bearing age. Also, folate deficiency occurs more commonly among depressed people, and inadequate levels of the vitamin decrease the positive effects of antidepressant medication.¹⁸ To stay smiling, make sure to eat enough folate-rich plant foods or take a folic acid supplement, but do not change any medication without first consulting your doctor.



For more information about folate and folic acid, see [Folic Acid Facts](#), or ask your doctor or dietitian.

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